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# **Safety Belt Usage In Illinois**

## **December 2003 Observational Survey Results**

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# **Illinois Department of Transportation**

## **Division of Traffic Safety**

### **Evaluation Unit**

The Evaluation Unit within the Division of Traffic Safety in the Illinois Department of Transportation focuses on evaluation and monitoring of various highway safety programs in Illinois. The research and evaluation issues include costs and benefits of child seats, safety belts and motorcycle helmets in the real world of crashes, evaluation of highway safety projects and programs, such as Traffic Law Enforcement Program (TLEP), Local Alcohol Program (LAP), IMaGE projects, high accident locations project, and health care costs and utilization of motor vehicle crash victims.

This report provides estimated safety belt usage rates in Illinois using a statistical (multi-stage random) observational survey conducted statewide during December 2003 on both high volume state highways and low volume local roads and residential streets in Illinois. In addition, the report provides safety belt usage rates by vehicle type (passenger car and pickup truck), region, road type, time of day, and day of week.

The report was compiled and prepared by the Evaluation staff. Comments or questions may be addressed to Mehdi Nassirpour, Chief of Evaluation Unit, Bureau of Administrative Services, Division of Traffic Safety, Illinois Department of Transportation, 3215 Executive Park Drive, Springfield, Illinois 62794-9245.

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## Survey Design

The recent belt survey was a statistical (multi-stage random) observational survey conducted statewide during December 2003 on both high volume state highways and low volume local roads and residential streets. The survey provided a statistically representative sample of the state as a whole. The survey design was based on the National Highway Traffic Safety Administration's requirements and had four characteristics.

1. The survey was conducted between 7:00 a.m. and 4:30 p.m. when the light was adequate for observation.
2. The survey observations were restricted to front seat occupants (drivers and outboard passengers) of passenger cars (cars, sport utility vehicles, taxis and vans) and pickup trucks.
3. Only the use of a shoulder harness was observed since vehicles passed an observation point without stopping.
4. The survey sites included interstate highways, freeways, county roads, state highways, and a random sample of residential streets within selected areas.

There were 111,154 front seat occupants observed at 258 locations statewide in this survey. Of those, 99,240 were in passenger cars (which included cars, sport utility vehicles, and vans) and 11,914 were in pickup trucks. For more information on survey design, refer to the original report entitled "Design of the New Safety Belt Usage Survey in Illinois", Division of Traffic Safety, Illinois Department of Transportation (IDOT), January 1994.

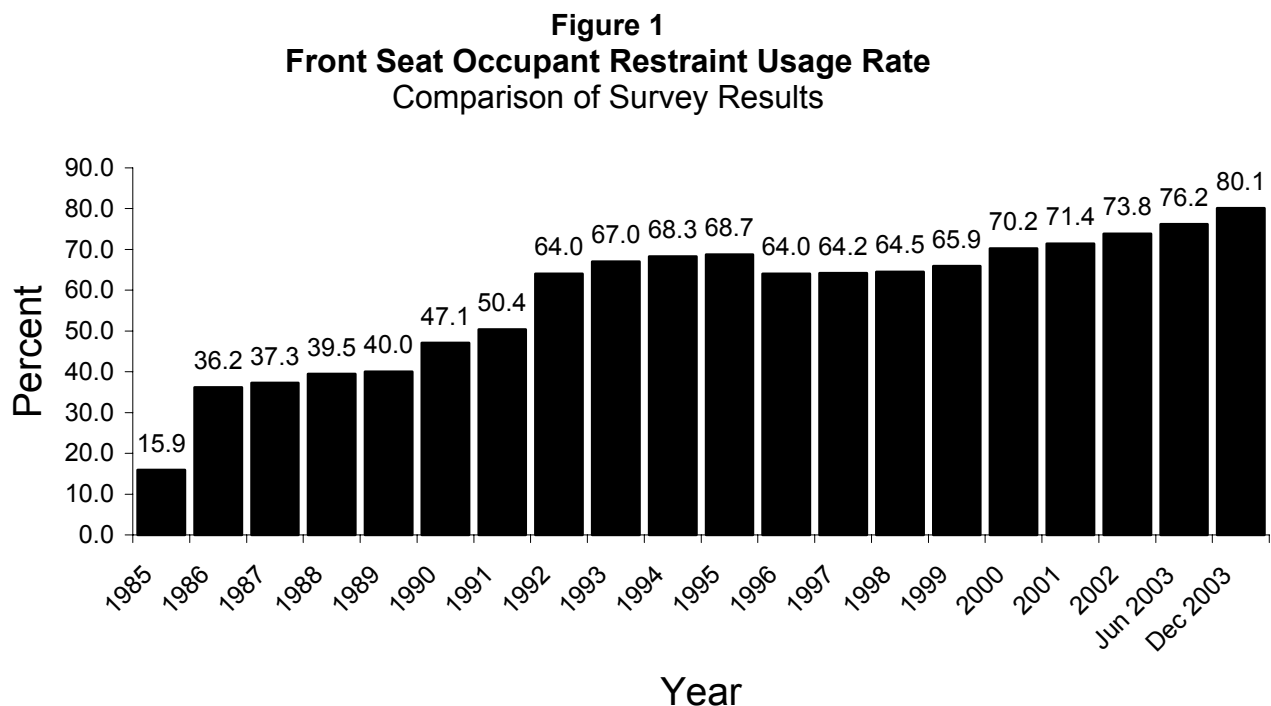
## Historical Trends

The first Illinois safety belt law was passed in January 1985 and became effective July 1, 1985. Originally, the safety belt law specified primary enforcement for front seat occupants of vehicles. Under this law, motor vehicles were required to be equipped with safety belts with the exception of those people frequently leaving their vehicles for deliveries if speed between stops was no more than 15 mph, medical excuses, rural letter carriers, vehicles operating in reverse, and vehicles manufactured before 1965. In 1987 the original law was amended and became effective in January 1988 as a secondary enforcement law until July 3, 2003.

On July 3<sup>rd</sup>, 2003, Governor Blagojevich signed primary safety belt legislation (Public Act 93-099) that took effect immediately. Under the primary belt law in Illinois, police officers can stop vehicles in which occupants fail to buckle up and issue citations.

Illinois' first safety belt survey was conducted in April 1985, prior to the safety belt law becoming effective on July 1, 1985. The data from the first survey became a base from which to measure the success of Illinois' efforts to educate citizens about the benefits of using safety belts.

The base line (April 1985) occupant restraint usage rate for all front seat occupants (drivers and passengers) observed in Illinois was 15.9 percent. During the first twelve months after the safety belt law became effective, the observed usage rate increased to 36.2 percent. Since the first survey was conducted in April 1985, the usage rate has increased by more than 64 percentage points peaking at 80.1 percent in December 2003 (**see Figure 1**). It should be noted that the 1998 through 2003 safety belt surveys include pickup truck drivers and passengers who tend to have significantly lower usage rates than the front seat occupants of passenger cars. For example, the usage rates for the pickup truck occupants were 56.5 percent in 2001, 60.9 percent in 2002, 64.2 percent in June 2003, and 68.2 percent in December 2003.



**Note: 1998 through 2003 safety belt usage rates include pickup truck drivers and passengers.**

## Summary of Findings

**Tables 1, 2, and 3** show results of the safety belt survey conducted at 258 sites during December 2003. Columns 1, 3, and 5 show the total number of observations for drivers, passengers, and combined drivers and passengers respectively. Columns 2, 4, and 6 represent actual safety belt usage rates for drivers, passengers, and totals (drivers and passengers). The categories listed down the left side of the table indicate the regions of the state where surveys were conducted (with the number of sites in each region in parentheses), road types, and a breakdown of weekdays and weekends. A total of 111,154 front seat occupants were observed during the survey. Looking at these tables, it is evident that the safety usage rate patterns across selected categories for drivers are similar to that for passengers.

**Table 1** shows safety belt usage rates for combined passenger cars and pickup trucks. Of the 111,154 observed front seat occupants, 80.1 percent were wearing seat belts. The Downstate Counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St.Clair) had the highest usage rate at 85.3 percent. The Collar Counties (DuPage, Kane, Lake, McHenry, and Will) had the second highest usage rate at 81.2 percent. Cook County, excluding the City of Chicago, had a usage rate of 75.0 percent, while the City of Chicago had the lowest usage rate at 74.4 percent. Interstate highway travelers had the highest usage rate at 89.3 percent followed by US and Illinois marked highway travelers at 79.6 percent. Motorists traveling on residential streets had the lowest usage rate at 76.4 percent. The usage rate on weekends was higher at 82.6 percent than the 77.6 percent on weekdays.

**Table 2** presents safety belt use data and information for drivers and passengers of passenger cars excluding pickup trucks. Of the 99,240 observations, 81.5 percent were wearing seat belts. The safety belt usage rate for drivers was slightly higher than that for passengers (81.8 percent versus 79.8 percent). The usage rate patterns across selected categories in **Table 2** are similar to the usage rate patterns shown in **Table 1**.

**Table 3** shows safety belt use patterns for pickup truck drivers and passengers. A total of 9,982 drivers and 1,932 passengers were observed. Passengers had a slightly higher seat belt usage rate than drivers (68.2 percent verses 67.9 percent). The usage rate patterns across selected categories in **Table 3** are similar to the overall usage rate patterns shown in **Table 1**.

**Table 4 through Table 6** present safety belt usage rates in June 2003 and December 2003 and percent changes among front seat occupants of passenger cars and pickup trucks.

**Table 4** and **Figure 2** depict that the overall safety belt usage rate among drivers and front seat passengers increased by 3.9 percent from 76.2 percent in June 2003 to 80.1 percent in December 2003. The Downstate Counties had the highest percentage point increase in belt use of 6.3. The City of Chicago had the second highest increase in belt use of 5.3 percentage points. Cook County, excluding the City of Chicago, had an increase in belt use of 4.1 percentage points. The Collar Counties had the lowest change with an increase of 1.8 percentage points. Safety belt usage increased by 4.6 percentage points on residential roads. This was followed by safety belt usage on U.S. and Illinois marked highways with a percentage point increase of 3.7. Interstate highways had the increase of safety belt usage with a percentage point increase of 2.0. There was a slightly higher increase of safety belt usage on weekdays than on weekends (a 4.1 percentage point increase on weekdays vs. a 3.5 percentage point increase on weekends).

**Table 5** and **Figure 3** show that the safety belt use among passenger car drivers and passengers increased by 3.7 percentage points from 77.8 percent in June 2003 to 81.5 percent in December 2003. Based on region, the City of Chicago had the highest percentage point increase of safety belt use of 5.9. This was followed by the Downstate Counties with a percentage point increase of 5.3. Cook County, excluding the City of Chicago, had a percentage point increase of 4.3. The Collar Counties had the lowest percentage point increase of 1.7.

**Table 6** and **Figure 4** show that the safety belt usage for pickup truck drivers and passengers increased by four percentage points from 64.2 percent in June 2003 to 68.2 percent in December 2003. The Downstate Counties had the highest percentage point increase of more than 11. The Collar Counties and Cook County, excluding the City of Chicago, had percentage point increases of 0.9 and 0.8 respectively. On the other hand, the City of Chicago had a percentage point decrease of 2.0. Safety belt usage on U.S./Illinois highways increased by 4.8 percentage points (from 60.4 percent in June 2003 to 65.2 percent in December 2003). Safety belt use increased by 4.1 percentage points on residential roads and 2.8 percentage points on Interstate highways. Based on day of the week, safety belt usage for pickup trucks increased on weekends and weekdays by 5.1 percentage points and 3.0 percentage points respectively.

**Table 1**  
**Overall Safety Belt Usage Rates in Illinois**  
**(December 2003)**

Selected Characteristics	Drivers		Passengers		Total	
	Total Observed	Actual Usage Rate	Total Observed	Actual Usage Rate	Total Observed	Actual Usage Rate
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Statewide (258)</b>	<b>93,731</b>	<b>80.4%</b>	<b>17,423</b>	<b>78.5%</b>	<b>111,154</b>	<b>80.1%</b>
<b>Regions</b>						
City of Chicago (46)	18,178	75.0%	2,854	70.6%	21,032	74.4%
Cook County (40)	11,751	76.1%	1,821	67.9%	13,572	75.0%
Collar Counties (118)	42,786	81.3%	8,807	80.6%	51,593	81.2%
Downstate (54)	21,016	85.5%	3,941	84.2%	24,957	85.3%
<b>Road Type</b>						
Residential (190)	55,362	76.9%	9,417	73.2%	64,779	76.4%
U.S./Illinois Highways (40)	16,137	79.8%	3,150	78.1%	19,287	79.6%
Interstate Highways (28)	22,232	89.4%	4,856	88.9%	27,088	89.3%
<b>Day of Week</b>						
Weekends (115)	45,169	82.6%	10,295	82.3%	55,464	82.6%
Weekdays (143)	48,562	78.3%	7,128	73.0%	55,690	77.6%

Note: Pickup trucks and passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.  
Due to lack of daylight hours in December, time of day has been excluded from the tables.



**Table 2**  
**Passenger Car Safety Belt Usage Rates in Illinois**  
**(December 2003)**

Selected Characteristics	Drivers		Passengers		Total	
	Total Observed (1)	Actual Usage Rate (2)	Total Observed (3)	Actual Usage Rate (4)	Total Observed (5)	Actual Usage Rate (6)
<b>Statewide (258)</b>	<b>83,749</b>	<b>81.8%</b>	<b>15,491</b>	<b>79.8%</b>	<b>99,240</b>	<b>81.5%</b>
<b>Regions</b>						
City of Chicago (46)	17,030	76.1%	2,641	72.3%	19,671	75.6%
Cook County (40)	10,766	77.5%	1,640	68.5%	12,406	76.3%
Collar Counties (118)	38,340	83.2%	7,944	81.9%	46,284	83.0%
Downstate (54)	17,613	87.1%	3,266	86.3%	20,879	87.0%
<b>Road Type</b>						
Residential (190)	50,229	78.3%	8,442	74.4%	58,671	77.7%
U.S./Illinois Highways (40)	13,863	82.3%	2,725	80.0%	16,588	81.9%
Interstate Highways (28)	19,657	90.7%	4,324	90.2%	23,981	90.6%
<b>Day of Week</b>						
Weekends (115)	40,708	84.0%	9,199	83.5%	49,907	83.9%
Weekdays (143)	43,041	79.8%	6,292	74.3%	49,333	79.1%

Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.  
Due to lack of daylight hours in December, time of day has been excluded from the tables.

**Table 3**  
**Pickup Truck Safety Belt Usage Rates in Illinois**  
**(December 2003)**

Selected Characteristics	Drivers		Passengers		Total	
	Total Observed (1)	Actual Usage Rate (2)	Total Observed (3)	Actual Usage Rate (4)	Total Observed (5)	Actual Usage Rate (6)
<b>Statewide (258)</b>	<b>9,982</b>	<b>68.2%</b>	<b>1,932</b>	<b>67.9%</b>	<b>11,914</b>	<b>68.2%</b>
<b>Regions</b>						
City of Chicago (46)	1,148	58.9%	213	49.8%	1,361	57.5%
Cook County (40)	985	61.0%	181	62.4%	1,166	61.2%
Collar Counties (118)	4,446	65.3%	863	68.6%	5,309	65.9%
Downstate (54)	3,403	77.2%	675	74.2%	4,078	76.7%
<b>Road Type</b>						
Residential (190)	5,133	63.8%	975	63.2%	6,108	63.7%
U.S./Illinois Highways (40)	2,274	65.1%	425	65.9%	2,699	65.2%
Interstate Highways (28)	2,575	79.7%	532	78.2%	3,107	79.4%
<b>Day of Week</b>						
Weekends (115)	4,461	69.7%	1,096	71.5%	5,557	70.1%
Weekdays (143)	5,521	67.0%	836	63.2%	6,357	66.5%

Note: Large trucks were excluded from this table.

Due to lack of daylight hours in December, time of day has been excluded from the tables.

**Table 4**  
**Overall Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2003 and December 2003)**

Selected Characteristics	Drivers			Passengers			Total		
	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change
<b>Statewide (258)</b>	<b>76.4%</b>	<b>80.4%</b>	<b>4.0</b>	<b>75.2%</b>	<b>78.5%</b>	<b>3.3</b>	<b>76.2%</b>	<b>80.1%</b>	<b>3.9</b>
<b>Regions</b>									
City of Chicago (46)	69.3%	75.0%	5.7	67.8%	70.6%	2.8	69.1%	74.4%	5.3
Cook County (40)	71.8%	76.1%	4.3	64.5%	67.9%	3.4	70.9%	75.0%	4.1
Collar Counties (118)	79.5%	81.3%	1.8	79.0%	80.6%	1.6	79.4%	81.2%	1.8
Downstate (54)	79.3%	85.5%	6.2	77.5%	84.2%	6.7	79.0%	85.3%	6.3
<b>Road Type</b>									
Residential (190)	72.2%	76.9%	4.7	69.9%	73.2%	3.3	71.8%	76.4%	4.6
U.S./Illinois Highways (40)	76.9%	79.8%	2.9	74.0%	78.1%	4.1	76.3%	80.0%	3.7
Interstate Highways (28)	87.1%	89.4%	2.3	88.0%	88.9%	0.9	87.3%	89.3%	2.0
<b>Day of Week</b>									
Weekends (115)	78.9%	82.6%	3.7	80.2%	82.3%	2.1	79.1%	82.6%	3.5
Weekdays (143)	74.2%	78.3%	4.1	69.3%	73.0%	3.7	73.5%	77.6%	4.1

Note: Pickup trucks and passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.  
Due to lack of daylight hours in December, time of day has been excluded from the tables.

**Table 5**  
**Passenger Car Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2003 and December 2003)**

Selected Characteristics	Drivers			Passengers			Total		
	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change
<b>Statewide (258)</b>	<b>78.0%</b>	<b>81.8%</b>	<b>3.8</b>	<b>76.7%</b>	<b>79.8%</b>	<b>3.1</b>	<b>77.8%</b>	<b>81.5%</b>	<b>3.7</b>
<b>Regions</b>									
City of Chicago (46)	69.8%	76.1%	<b>6.3</b>	68.6%	72.3%	<b>3.7</b>	69.7%	75.6%	<b>5.9</b>
Cook County (40)	73.0%	77.5%	<b>4.5</b>	65.3%	68.5%	<b>3.2</b>	72.0%	76.3%	<b>4.3</b>
Collar Counties (118)	81.4%	83.2%	<b>1.8</b>	80.8%	81.9%	<b>1.1</b>	81.3%	83.0%	<b>1.7</b>
Downstate (54)	82.2%	87.1%	<b>4.9</b>	79.7%	86.3%	<b>6.6</b>	81.7%	87.0%	<b>5.3</b>
<b>Road Type</b>									
Residential (190)	73.5%	78.3%	<b>4.8</b>	71.0%	74.4%	<b>3.4</b>	73.1%	77.7%	<b>4.6</b>
U.S./Illinois Highways (40)	79.8%	82.3%	<b>2.5</b>	77.0%	80.0%	<b>3.0</b>	79.2%	81.9%	<b>2.7</b>
Interstate Highways (28)	88.7%	90.7%	<b>2.0</b>	89.3%	90.2%	<b>0.9</b>	88.8%	90.6%	<b>1.8</b>
<b>Day of Week</b>									
Weekends (115)	80.7%	84.0%	<b>3.3</b>	81.4%	83.5%	<b>2.1</b>	80.8%	83.9%	<b>3.1</b>
Weekdays (143)	75.5%	79.8%	<b>4.3</b>	70.7%	74.3%	<b>3.6</b>	74.9%	79.1%	<b>4.2</b>

Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.  
Due to lack of daylight hours in December, time of day has been excluded from the tables.

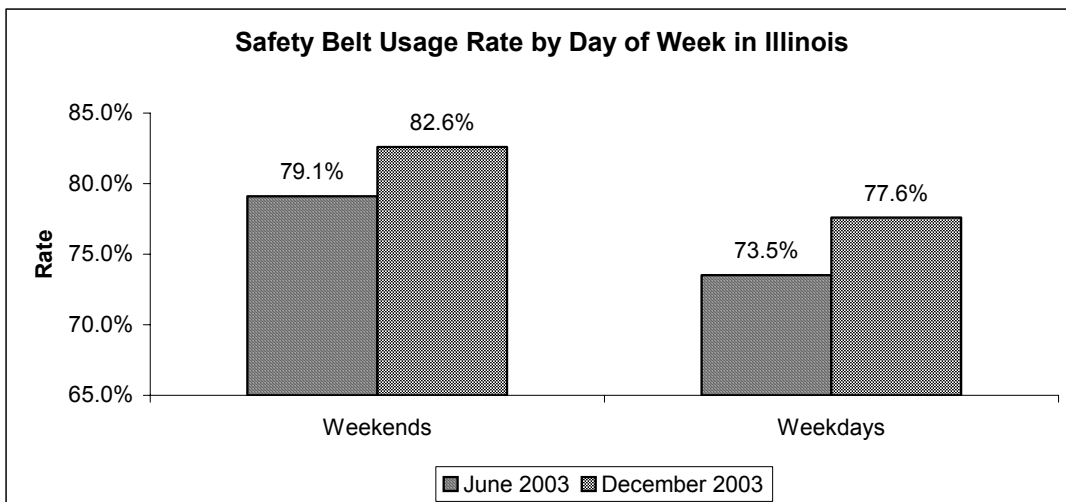
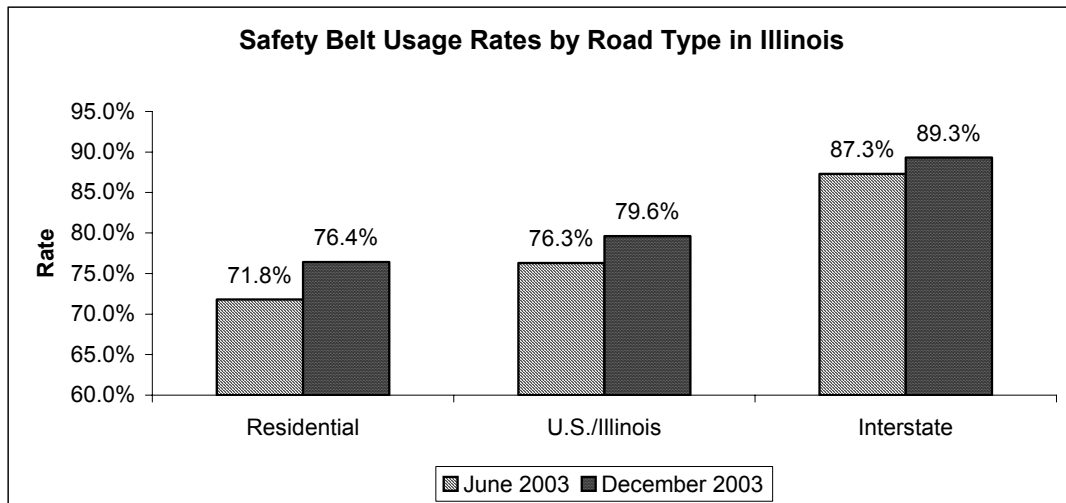
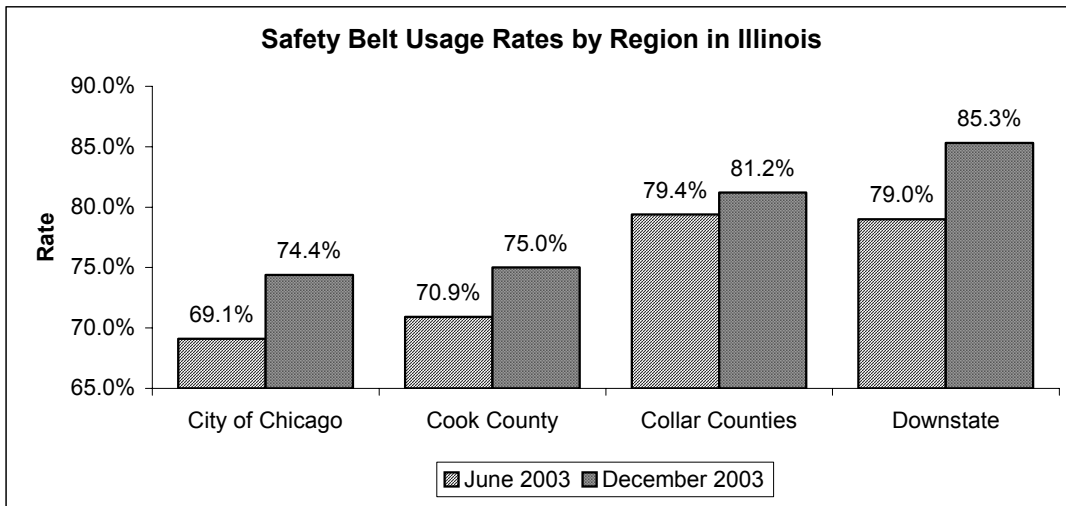
**Table 6**  
**Pickup Truck Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2003 and December 2003)**

Selected Characteristics	Drivers			Passengers			Total		
	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change	Usage Rate (June 2003)	Usage Rate (Dec. 2003)	Percent Change
<b>Statewide (258)</b>	<b>64.1%</b>	<b>68.2%</b>	<b>4.1</b>	<b>64.7%</b>	<b>67.9%</b>	<b>3.2</b>	<b>64.2%</b>	<b>68.2%</b>	<b>4.0</b>
<b>Regions</b>									
City of Chicago (46)	60.3%	58.9%	-1.4	55.3%	49.8%	-5.5	59.5%	57.5%	-2.0
Cook County (40)	60.9%	61.0%	0.1	57.8%	62.4%	4.6	60.4%	61.2%	0.8
Collar Counties (118)	64.5%	65.3%	0.8	66.8%	68.6%	1.8	65.0%	65.9%	0.9
Downstate (54)	65.6%	77.2%	11.6	65.6%	74.2%	8.6	65.6%	76.7%	11.1
<b>Road Type</b>									
Residential (190)	59.5%	63.8%	4.3	60.2%	63.2%	3.0	59.6%	63.7%	4.1
U.S./Illinois Highways (40)	60.7%	65.1%	4.4	58.9%	65.9%	7.0	60.4%	65.2%	4.8
Interstate Highways (28)	76.1%	79.7%	3.6	78.8%	78.2%	-0.6	76.6%	79.4%	2.8
<b>Day of Week</b>									
Weekends (115)	64.1%	69.7%	5.6	69.3%	71.5%	2.2	65.0%	70.1%	5.1
Weekdays (143)	64.1%	67.0%	2.9	60.3%	63.2%	2.9	63.5%	66.5%	3.0

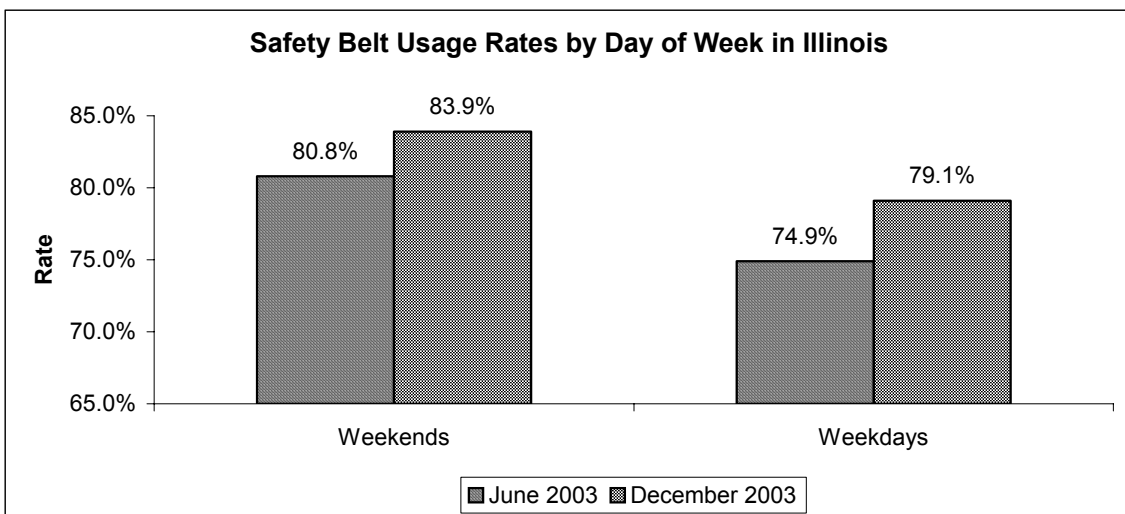
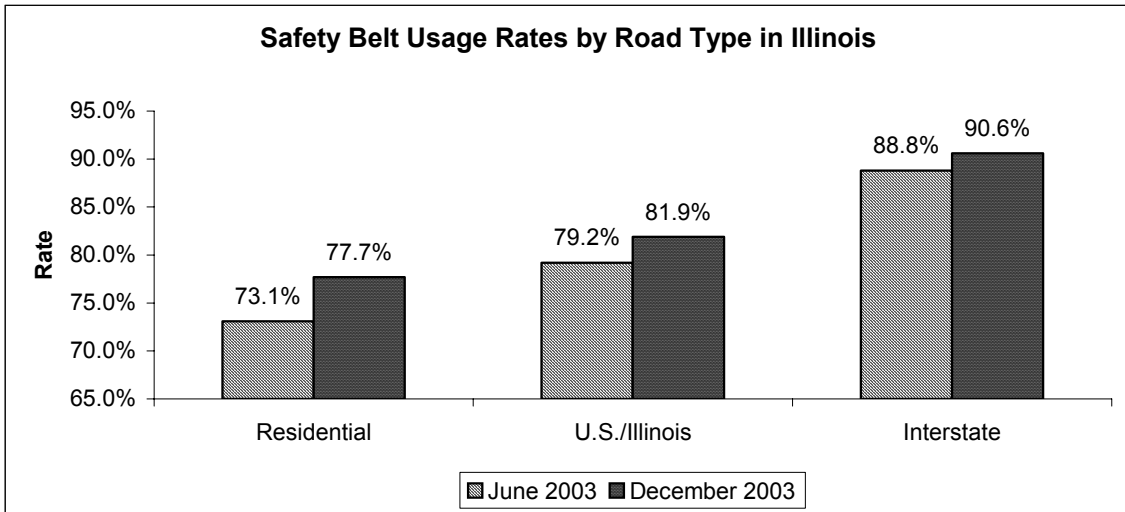
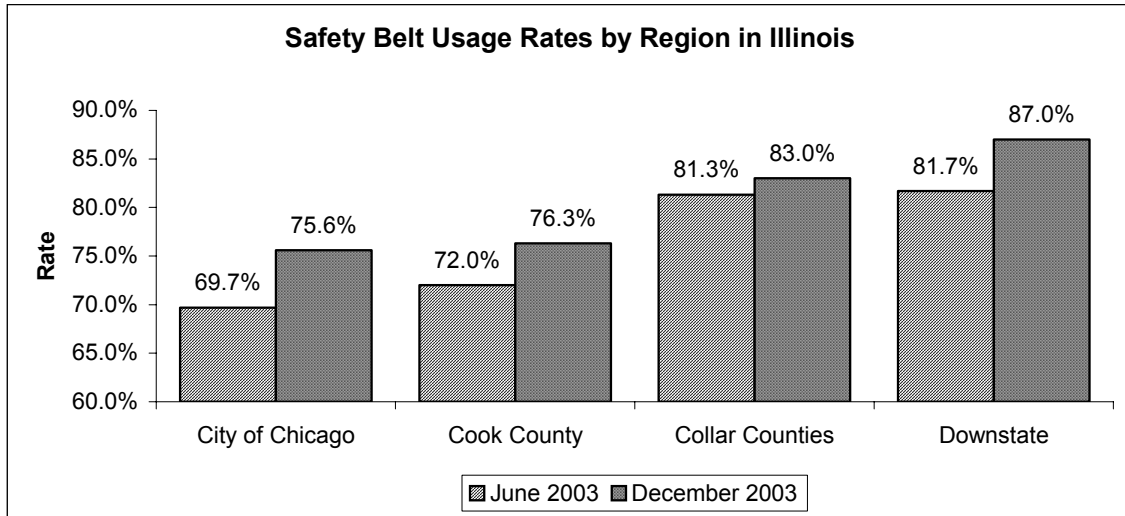
Note: Large trucks were excluded from this table.

Due to lack of daylight hours in Decemeber, time of day has been excluded from the tables.

**Figure 2**  
**Overall Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2003 and December 2003)**



**Figure 3**  
**Passenger Car Safety Belt Usage Rates in Illinois in June and December 2003**  
**(Comparison of June 2003 and December 2003)**



**Figure 4**  
**Pickup Truck Safety Belt Usage Rates in Illinois in June and December 2003**  
**(Comparison of June 2003 and December 2003)**

